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*On New or Little-Known Butterflies from the Indo- and Austro-Malayan Regions.*—By LIONEL DE NICÉVILLE, F.E.S., C.M.Z.S., &c.

(With Plates I, II, III and IV.)

[Received May 20th ;—Read July 7th, 1897.]

Family NYMPHALIDÆ.

Subfamily DANAINÆ.

1. EUPLŒA (*Vadebra*) ELWESIANA, n. sp., Plate I, Fig. 4, ♂.

HABITAT: Bali ; Lombok ; Sambawa (*Doherty*).

EXPANSE: ♂, 3·0 to 3·2; ♀, 2·9 to 3·0 inches.

DESCRIPTION: MALE. UPPERSIDE, *both wings* deep pitchy-brown colour. *Forewing* with the outer margin broadly pale brown, its inner margin even, broadest at the apex, slightly narrowing to the anal angle. *Hindwing* with the outer margin broader and paler than in the forewing, dirty-white in the middle; the costa broadly pale fuscous. UNDERSIDE, *both wings* pale brown. *Forewing* dark pitchy-brown in the middle; a rather large reniform pale violet spot at the lower outer end of the discoidal cell; beyond which are three pale violet spots, the anterior one in the lower discoidal interspace linear, the one posterior to this oval, the posteriormost one the largest and oval; three or four submarginal white dots. *Hindwing* with a broad marginal white area not quite reaching the outer margin or the apex of the

wing; a spot at the end of the cell, and five just beyond the cell, all of nearly equal size, small, rounded, pale violet; a submarginal apical series of three small rounded white spots; and a marginal apical series of five small round white dots. FEMALE, differs only from the male in sexual characters, the inner margin of the *forewing* is straight instead of being slightly outwardly bowed; with, on the underside, a white streak in the middle of the submedian interspace.

Mr. Doherty\* thus refers to this species under *Euplaea* (*Crastia* or *Vadebra*) *palmedo*, Doherty:—"An allied form occurs in Sambawa, with the margins broadly whitish as in *E. [Vadebra] climena*, Cramer [from Amboina and Ceram], and without the conspicuous subapical white band of the forewing" of *E. palmedo*. The species is nearest to *Vadebra macleari*, Butler,† from which it appears to differ in having the outer margin of the hindwing on the upperside much less broadly white, and of a dirty-white instead of "snow-white" shade, with no apical white spots, in *E. macleari* there are seven spots in two series, two and five; on the underside the outer white area differs as above. From *Vadebra sepulchralis*, Butler,‡ it appears to differ in having on the underside of the hindwing a continuous dirty-white marginal area, in that species this area is broken up into narrow elongated white spots between the veins. *E. sobrina*, Röber, from Goram, and *E. neptis*, Röber, from Flores (Tijd. voor Ent., vol. xxxiv, p. 297 (1891), are probably allied species, but in the absence of figures it is impossible to say if this is so with certainty from the short descriptions given of them.

Described from a male taken by Mr. W. Doherty in the low country of Bali in April, 1896, and two pairs captured by Herr H. Fruhstorfer at 2,000 feet elevation at Sapit in Lombok in May and June, 1896. The specimen figured is from Bali.

#### Subfamily SATYRINÆ.

##### 2. LETHE (*Kerrata*) LYNCUS, n. sp., Plate I, Fig. 8, ♂.

HABITAT: Native Sikkim.

EXPANSE: ♂, 2·2 inches.

DESCRIPTION: MALE. UPPERSIDE, *both wings* hair-brown, with a strong silky ochreous-bronzy gloss; a submarginal deep brown fascia. *Forewing* has the discoidal cell crossed by two dark brown bars, one at the middle, the other towards the end; a discal irregular dark brown

\* Journ. A. S. B., vol. lx, pt. 2, p. 162 (1891).

† Proc. Zool. Soc. Lond., 1887, p. 522, woodcut fig. 4, *male*, from Christmas Island.

‡ Proc. Zool. Soc. Lond., 1866, p. 282, n. 46, woodcut fig. 2, page '283, *male*, from Java.

band from the costa to the submedian nervure, anteriorly broad and touching the disco-cellular nervules inwardly, posteriorly narrow, between the first median nervule and the submedian nervure inwardly oblique; a short subapical pale ochreous bar within the submarginal fascia reaching from the costa to the upper discoidal nervule. *Hindwing* with an indistinct irregular discal dark brown fascia; beyond which are five round dark brown spots decreasing in size from anteriorly backwards. *UNDERSIDE*, both wings shining pale ochreous, with the markings darker ochreous. *Forewing* has the two discoidal bars as on the upper-side, the inner one broad, the outer one narrow, the space between them yellow; the discal fascia is broader and more prominent than above, its outer edge sharply defined; the discal area beyond is yellow becoming darker till it is almost lost in the submarginal fascia; the subapical spots as on the upperside three in number and white; the margin is somewhat broadly pale, bisected by a narrow straight brown line. *Hindwing* has a basal irregular dark fascia outwardly defined by a narrow yellow line; beyond which is a dark line from the costa to the submedian nervure where it ends between the points of origin of the first and second median nervules; a dark fusiform bar defines the disco-cellular nervules; a broad highly irregular discal fascia from the costa to the abdominal margin; a submarginal series of six black ocelli with white pupils, yellow iris, outer dark ring, with an outermost pale violet ring, the anal ocellus twinned, all the ocelli of nearly equal size, the first and fifth slightly larger than the others; the margin bears a somewhat broad ochreous line, defined on both sides by a dark brown thread, inwardly again with a pale violet line, somewhat dilated at the anal angle. *Cilia* cinereous throughout.

In India this species is nearest allied to *L. tristigmata*, Elwes, also from Sikkim, but it is smaller, the "male-mark" on the upperside of the forewing on the disc is barely traceable, on the underside of that wing the four (sometimes five) discal pale violet spots are wanting being replaced by a short subapical bar, with some other minor differences. It is still nearer to *L. ocellata*, Poujade,\* from Mon-Pin in Eastern Thibet, and Omei-shan and Pu-tsu-fong in Western China, of which *L. simulans*, Leech, is a synonym, from which it appears to differ on the upperside of the forewing in the presence of the short subapical pale bar; the ground-colour of the underside is pale ochreous instead of "greyish-brown," and the discal dark bands of the hindwing seem also to be somewhat differently placed. It is also apparently

\* *Debis ocellata*, Poujade, Bull. Soc. Ent. France, sixth series, vol. v, p. x (1885); *Letho ocellata*, Leech, Butt. from China, Japan, and Corea, p. 34, pl. iii, fig. 3, male (1892).

allied to *L. armandina*, Oberthür,\* from Moupin and Western China, from which it differs in the discal fascia of the forewing on the upperside not being "bordered outwardly with yellowish," and the bands of the hindwing on the underside not being "violet-grey."

Described from a male taken in Native Sikkim at 10,000 feet, in August, 1895, kindly given to me by Mr. G. C. Dudgeon; and another in Mr. Dudgeon's collection from Gantok, also in Native Sikkim, taken at 7,000 feet in July, 1895.

3. *YPITHIMA MEGALIA*, n. sp., Plate I, Fig. 5, ♂.

HABITAT: North Shan States, Upper Burma.

EXPANSE: ♂, 1.9 inches.

DESCRIPTION: MALE. UPPERSIDE, *both wings* shining hair-brown, with an indistinct submarginal fuscous fascia. *Cilia* cinereous. *Forewing* with the usual subapical deep black ocellus bipupilled with silver, outwardly defined with a dull yellow ring. *Hindwing* with a similar unipupilled subanal small ocellus. UNDERSIDE, *forewing* pale brown, finely and evenly striolated throughout (except narrowly along the inner margin) with white and ochreous of a curious shade; the ocellus as above but larger, with the pupils metallic pale blue, and the outer yellow ring wider than on the upperside. *Hindwing* with no trace of ocelli; striolated as in the forewing, but the white and yellow striolæ not so much intermixed, there being an ill-defined broad yellow fascia across the disc from the middle of the costa to the middle of the abdominal margin, followed by a still broader but equally ill-defined whitish fascia, which is broken into broadly on the middle of the outer margin by a large triangular patch of the yellow striolation.

*Y. megalia* comes into Group IX of Elwes' Revision of the genus *Ypthima*, Trans. Ent. Soc. Lond., 1893, p. 44, and is nearly allied to *Y. megalomma*, Butler, and *Y. insolita*, Leech, both from China. From the former (as figured by Leech in Butt. China, p. 86, pl. ix, fig. 2, *male*) it differs in its more elongate (less broad and rounded) wings, and the ocelli of both wings on the upperside very considerably smaller, half the size in fact. The ocelli in *Y. megalomma* appear to be variable as regards numbers, Mr. Leech's figure shews them as in *Y. megalia*, but in the type and in two others in Mr. Leech's collection there is an extra ocellus in the forewing on the underside in the first median interspace. *Y. megalia* differs from *Y. insolita*, l. c., pl. ix, fig. 1, *male*, in also having the ocelli much smaller; that species on both surfaces has a second ocellus in the first median interspace on the forewing, and three ocelli (one apical and two anal) on the underside of the hindwing.

\* *Debis armandina*, Oberthür, Études d'Ent., vol. vi, p. 16, n. 8, pl. vii, fig. 6, *male* (1881); *Zophoessa armandina*, Leech, Butt. from China, Japan, and Corea, p. 43 (1892).



Described from a single example for which I am indebted to Major F. B. Longe, R. E., captured in the Kokang State, 5,500 feet, North Shan States, on the Chinese frontier east of Bhamo, on 6th April, 1895.

Subfamily NYMPHALINÆ.

4. *CYNTHIA CYONIA*, n. sp., Plate III, Figs. 19, ♂; 20, ♀.

HABITAT: Ké Islands.

EXPANSE: ♂, 3·4; ♀, 3·6 to 3·8 inches.

DESCRIPTION: MALE. UPPERSIDE, *forewing* differs from *C. orahilia*, Kheil,\* from Nias Island, in the discal black line just beyond the discoidal cell being straighter and thereby more continuous; beyond this there is a series of six black lunules crossing the middle of the disc, the anteriormost one developed into a rounded spot, the posteriormost one W-shaped; beyond this again there are five small round black spots placed between the veins (one being wanting in the lower discoidal interspace), in *C. orahilia* there are never more than four, and usually three or two; the interior of the two submarginal black lines is more lunulated in *C. cyenia*; and the anteciliary black thread is narrower. *Hindwing* has the interior submarginal black line also more lunulated, and the anteciliary black thread also inconspicuous, in *C. orahilia* it is very prominent. UNDERSIDE, *both wings* of a rich red-orange colour instead of ochreous; the discal black line almost perfectly straight instead of being irregular; the interior submarginal line more irregular; the markings otherwise similar. In outline *C. cyenia* has the forewing more produced at the apex, the outer margin consequently more deeply excavated; and the tail of the hindwing is rather longer. FEMALE. UPPERSIDE, *both wings* dark ochreous, sprinkled throughout (except a broad discal paler ochreous area) with fuscous, in the male the ground-colour is rich dark red-orange; the markings almost precisely similar to those of the male, differing only in the *forewing* in the discal black line just beyond the discoidal cell being broader and lunulated instead of being almost straight; and the five discal round black spots are considerably larger. UNDERSIDE, *both wings* differ from the male in being ochreous instead of red-orange; the markings similar. The female differs markedly from the same sex of *C. orahilia* as figured by Herr Gustav Weymer in having the discal area of both sides of both wings rich ochreous instead of pure white; the markings, however, are very similar.

As far as I am aware this is the only species of *Cynthia* which has

\* *Cynthia orahilia*, Kheil, Rhop. Nias, p. 21, n. 36, pl. ii, fig. 9; *male* (1884); id., Weymer, Stet. Ent. Zeit., vol. xlv, p. 262 (1885); idem, id., l.c., vol. xlviii, p. 5, n. 2, pl. ii, fig. 3, *female* (1887).

the opposite sexes very similarly coloured, usually the male is tawny and the female green, with a broad discal white area: in the female of *C. cyenia* there is no trace of either of these colours. In fact, as far as coloration goes, the female is very similar to the male of *C. saloma*, de Nicéville.

Described from two males and two females received from Herr Georg Semper and Herr Heinrich Kühn.

*P. S.*—Since the above was put into type, I have received a pair of *C. erota austrosunda*, Fruhstorfer (*vide* Berl. Ent. Zeitsch., vol. xlii, p. (1897), from Lambok, to which species *C. cyenia* is very nearly allied. The male differs from that species in having the narrow discal black line on the underside of the forewing quite straight instead of irregular; and the female differs in having the discal band on the forewing considerably broader.

5. *APATURA PAGENSTECHERII*, n. sp.

*A. parvata*, Pagenstecher (*nec* Moore), in Kükenthal's *Ergeb. Zool. Forsch. Molukken und Borneo*, p. 402, n. 181, pl. xx, fig. 3, female (1897).

HABITAT: Celebes (Donggola).

EXPANSE: ♀, 2·6 inches.

DESCRIPTION: FEMALE. I propose to rename after Dr. Arnold Pagenstecher the species of *Apatura* he has identified and figured from Celebes in the work cited above. *A. parvata*, Moore, was described from "N. India," and a male was figured. It occurs somewhat rarely in Sikkim, Bhutan, and the Khasi Hills, while Mr. Henley Grose Smith has recorded it, probably erroneously, from Sumatra. The female of *A. pagenstecherii* differs from the same sex of *A. parvata* in its considerably larger size, all the markings being much more conspicuous, especially the discal band across both wings, which is pure white as figured in *A. pagenstecherii* and ferruginous in *A. parvata*; in the former there is a submarginal series of fuscous lunules, placed outwardly against a whitish submarginal line, in the latter the lunules are replaced by oval spots, and the whitish submarginal line is entirely absent. Superficially *A. pagenstecherii* is more similar to *A. (Rohana) nakula*, Moore, from Java and Bali, but a comparison between Dr. Pagenstecher's and my figures\* will disclose at once the many points in which they differ.

6. *NEPTIS (Phædyma) NECTENS*, n. sp., Plate I, Fig. 3, ♀.

HABITAT: Ké Islands.

EXPANSE: ♀, 2·7 inches.

DESCRIPTION: FEMALE. UPPERSIDE, *both wings* deep black, with brilliant pure white markings. *Forewing* with a clavate streak in the

\* *Journal Bomb. Nat. Hist. Soc.*, vol. ix, p. 262, pl. N, fig. 6, female (1895).

discoidal cell well separated from an almost quadrate spot beyond the cell; seven discal spots, arranged three, two, and two, the anteriormost spot very narrow and on the costa, the second elongated, well separated from the third, which is oblong with rounded ends; the two middle spots divided only by the second median nervule the largest, with rounded ends; the sixth spot small, placed just anterior to the submedian nervure; the seventh spot elongated, placed on the sutural area; two marginal series of spots, the inner one consisting of eight small rounded spots, the outer one incomplete, five only in number, and somewhat elongated. *Hindwing* with a very broad discal band, broadest in the middle, tapering to either end, extending from the abdominal margin to the first subcostal nervule, consisting of eight portions, its inner edge straight, its outer edge rather irregular, being cut into by the black ground-colour where the veins cross the band; obsolete submarginal and marginal series of whitish spots, the inner series towards the costa only being plainly visible. *UNDERSIDE*, both wings black, but of a more dusky tint than on the upperside. *Forewing* with the markings as above, but there is an additional fine lunulated line between the discal and marginal series of spots; the two marginal series of spots much more prominent and larger than above; the inner margin as far as the submedian nervure and first median nervule pale fuscous; the base of the costa orange. *Hindwing* with a short white streak at the base of the costa, posterior to this is a broader streak from the base to beyond the middle of the wing; the discal fascia as above, but broader, followed first by a fine narrow white line, second by a series of eight more or less lunular and prominent white spots, and third by two prominent disconnected marginal white lines, which are sullied with black between the second and third median nervules. *Cilia* black, here and there white. *Body* above black, beneath white.

Near to *N. shepherdii*, Moore, from New South Wales, Australia (Moore), and North-West New Guinea (Grose Smith), from the figure of which it differs in having the discal spots on the upperside of the forewing larger, and an additional spot anterior to the submedian nervure; the discal band of the hindwing being much broader; and from the description (as also my solitary specimen from New Guinea) in having the underside black, in *N. shepherdii* it is "ferruginous-brown, suffused in parts with paler brown." It is probably also near to *Phædyma heliopolis*, Felder, from Dodinga in Halmaheira (Gilolo) (Felder), and North-West New Guinea (Grose Smith), a species I have not seen.

Described from a single female in very fine condition received from Herr Heinrich Kühn.

## 7. CALINAGA CERCYON, n. sp., Plate II, Fig. 9, ♂.

HABITAT: The road between Tâ-Tsien-Loû and Mou-Pin, and the neighbourhood of Tâ-Tsien-Loû, Western China (May, 1895).

EXPANSE: ♂, 3·2 inches.

DESCRIPTION: MALE. Allied to *C. davidis*, Oberthür, from Moupin, Kouy-Tchéou, Tsé-Kou, Tâ-Tsien-Loû, Ouâ-Se, Yu-Tong, and Kitchang-Kou (*Oberthür*), Wa-ssu-kow, and Chow-pin-sa, Western China, and Chang-yang, Central China (*Leech*), differing therefrom on both surfaces in the ground-colour of both wings being pale straw-yellow instead of pale greenish-gray, and all the markings clear and unsullied, in *C. davidis* many of them are sullied with dusky scales, this is particularly noticeable in the discoidal cell of the forewing which has no dusky irrorations whatever except a very small outwardly oblique blackish bar beyond the middle; the pale streaks beyond the cell at the base of the median interspaces, and the very large one in the submedian interspace similarly have no dusky irrorations whatever; the outwardly-obliquely-placed discal series of spots from the costa to the third median nervule, and the submarginal series of seven rounded spots are also considerably larger. In the hindwing the discoidal cell has no markings whatever, in *C. davidis* there is usually a narrow outwardly bifurcated dusky streak, and the cell is always heavily bordered by dusky scales; all the spots on the disc are also much larger in the present species than they are in *C. davidis*; the submedian interspace also is at the base entirely free of dusky irrorations, while in *C. davidis* the anterior half between the internervular fold and the median nervure and first median nervule is dusky. It differs from *C. buddha*, Moore, in the ground-colour being pale straw-yellow instead of chalky-white, all the markings larger, especially those on the hindwing, the discoidal cell of the forewing being free of dusky irrorations, in *C. buddha* it is as dusky as in *C. davidis*, and it is also a much smaller insect.

M. Oberthür says that his original type specimen of *C. davidis* was a male, but from the figure I should say that it must certainly be a female. Mr. Leech in "The Butterflies of China, Japan, and Corea" has beautifully figured an undoubted male on plate xx, fig. 1. He notes on page 119 that *C. davidis* has two forms, the one from Moupin, Wa-ssu-kow and Chow-pin-sa in Western China being typical, while the one from Chang-yang in Central China, where it is common and "is the sole representative of the species, but also occurs sparingly in Western China, is greyish with the whitish markings well defined; the streaks and spots are often confluent, giving the appearance of a whitish insect with greyish marginal border and blackish venation." This description



apparently applies to *C. cercyon*, and as my specimens are distinguishable at a glance from typical *C. davidis*, both species being apparently constant (Mr. Leech does not hint at any intermediate form occurring), I have ventured to describe it. M. Oberthür (*Études d'Ent.*, vol. xviii, p. 14 (1893), also apparently refers to this species in speaking of *C. davidis*, and says: "The whitish spots are often confluent, which gives these specimens a less grey and less dark appearance."

I am indebted to M. Charles Oberthür for the gift of two specimens of *C. cercyon*, and five males and one female of *C. davidis*, the latter specimens shewing no variation whatever. A comparison between the figures of *C. davidis* and *C. cercyon* will make it apparent at once in what respects the two species differ. At present there are five species known of this interesting genus:—

(1) *Calinaga buddha*, Moore, Horsfield and Moore, *Cat. Lep. Mus. E. I. C.*, vol. i, p. 163, n. 336, pl. iia, fig. 5, *male* (1857); *id.*, de Nicéville, *Butt. Ind.*, vol. ii, p. 143, n. 435, *Frontispiece* fig. 122, *male* (1886); *id.*, Standinger, *Ex. Schmett.*, p. 138, pl. xlvii, *male* (1886); *C. brahma*, Butler, *Ann. and Mag. of Nat. Hist.*, fifth series, vol. xvi, p. 309, n. 63 (1885).

HABITAT: Himalayas; Assam.

(2) *Calinaga davidis*, Oberthür, *Études d'Ent.*, vol. iv, p. 107, (1879); *id.*, Leech, *Butt. China*, vol. i, p. 118, pl. xx, fig. 1, *male* (1894); *C. buddha*, Oberthür (*nec* Moore), l. c., vol. vi, p. 11, n. 1, pl. viii, fig. 6, *female* (*nec* male) (1881).

HABITAT: Western China.

(3) *Calinaga sudassana*, Melvill, *Trans. Ent. Soc. Lond.*, 1893, p. 121, pl. vii, figs. 1, 2, *female* (? *male*).

HABITAT: Mountainous regions about 100 miles N.-W. of Cheing Mai, Siam; Kunlon, Salwin Riven, N. Shan States, Upper Burma.

Mr. J. C. Melvill says that his type specimens (three) are females. To judge from the example in my collection from Upper Burma and from the figure I should say that all the known specimens are males.

(4) *Calinaga lhatso*, Oberthür, *Études d'Ent.*, vol. xviii, p. 13, pl. vi, fig. 81, *male* (1893); *id.*, Leech, *Butt. China*, p. 652 (1894).

HABITAT: Tsé-kou, Thibet.

M. Oberthür notes that at Tsé-kou are found *C. davidis*, *C. buddha*, and *C. lhatso*.

(5) *Calinaga cercyon*, de Nicéville.

HABITAT: The road between Tâ-Tsien-Loû and Mou-Piu, and the neighbourhood of Tâ-Tsien-Loû, in Western China.

8. *CHARAXES (Haridra) ARISTOGITON*, Felder, Plate II, Figs. 11, 12 gynandromorphous example.

*C. aristogiton*, Felder, Reise Novara, Lep., vol. iii, p. 445, n. 727 (1867); id., Butler, Trans. Ent. Soc. Lond., 1870, p. 121, n. 18 [err. 88]; idem, id., Journ., Linn. Soc. Lond., Zoology, vol. xxv, p. 397, n. 139 (1896); id., de Nicéville, Butt. India, vol. ii, p. 282, n. 573 (1886); idem, id., Journ. Bomb. Nat. Hist. Soc., vol. v, p. 296, n. 50 (1890); id., Adamson, Cat. Butt. Burmah, p. 20, n. 207 (1889); *C. (Haridra) aristogiton*, de Nicéville, Sikhim Gazetteer, p. 148, n. 236 (1894); id., de Nicéville and Martin, Journ. A. S. B., vol. lxiv, pt. 2, p. 438, n. 264 (1895); *Haridra aristogiton*, Moore, Lep. Ind., vol. ii, p. 236, pl. clxxiii, figs. 1, 1a, male (1895); *Charaxes aristogiton* [sic], Elwes, Trans. Ent. Soc. Lond., 1888, p. 368, n. 214; *Haridra aristogiton* [sic], Swinhoe, Trans. Ent. Soc. Lond., 1893, p. 289, n. 196; *Charaxes desa*, Moore, Proc. Zool. Soc. Lond., 1878, p. 832; id., de Nicéville, Butt. India, vol. ii, p. 283, n. 574 (1886); *Haridra desa*, Moore, Lep. Ind., vol. ii, p. 235, pl. clxxii, figs. 1, 1a, male; 1b, 1c [err. e], female (1895); *Haridra adamsoni*, Moore, Lep. Ind., vol. ii, p. 236, pl. clxxiii, figs. 2, 2a, male (1895).

HABITAT: Sikkim, Bhutan, Assam, Burma, the Malay Peninsula, Sumatra.

The gynandromorphous specimen of *C. aristogiton*, Felder, here figured, has been kindly lent to me by Herr Paul Möwis, who obtained it from a native collector at Darjiling in Sikkim. The true female of this species has not hitherto been known, though that of *C. desa*, Moore, which Dr. A. G. Butler and I consider to be the same species, is described and figured in Mr. Moore's "Lepidoptera Indica." I take this opportunity to state my opinion, in which Captain E. Y. Watson joins, than whom no one knows the butterflies of Burma better, that besides *C. desa*, which Mr. Moore restricts to Upper Tenasserim, *C. adamsoni*, Moore, from the same locality, is also synonymous with *C. aristogiton*. The species, as are all the tawny *Charaxes*, is variable, no two specimens in my collection being precisely alike, so that there is no gain to science (nor does it give expression to a real fact in nature) to pick out extreme individual varieties and give them distinctive specific names, more especially when, as in the present case, these varieties are not restricted to well-defined geographical areas.

In the Journ. A. S. B., vol. lxiii, pt. 2, p. 8, n. 7 (1894), I described and figured on pl. iii, figs. 1, 2, a gynandromorphous example of *Argynnis niphe*, Linnæus, from Behar, and gave a list of four specimens of other Asiatic species known to me. Mr. Möwis informs me that he once purchased from a soldier at Deolali, Nasik, Bombay Presidency, a specimen of a *Curetis* now in Colonel Swinhoe's collection, which was very conspicuous, as the male side was copper-coloured, the female side white. He also obtained a specimen of *Appias hippo*, Cramer = *A. hippoides*, Moore, from Sikkim, which he parted with to Herr A. Böttcher of Berlin. I have come across other references to these monstrosities











BLD6s del.

West, Newman chromo.



B.L.Dós del.

West, Newman chromo.

INDO-AND AUSTRO-MALAYAN BUTTERFLIES.

from Asia. In Horsfield and Moore's Cat. Lep. Mus. E. I. C., vol. i, p. 158, n. 327 (1857), a "hermaphrodite" specimen of *Diadema* [*Hypolimnas*] *bolina*, Linnæus, is recorded from Canara in South India. Dr. A. G. Butler in Proc. Zool. Soc. Lond., 1866, p. 172, woodcut n. 1, p. 173, describes and figures a "hermaphrodite" *Danaïs* (*Nasuma*) *ismare*, Cramer, the left-hand side being a male (*D. ismare*), the right-hand side being a female (*D. ismareola*, Butler). Mr. H. J. Elwes in Trans. Ent. Soc. Lond., 1888, p. 408, n. 357, records a gynandromorphous specimen of *Delias descombesi*, Boisduval, from Sikkim. Dr. E. Haase in Iris, vol. i, p. 36, pl. iii, fig. 2 (1888), describes and figures a hermaphrodite specimen of *Danaïs* (*Nasuma*) *ismare*, Cramer, from Ceram. Herr Eduard G. Honrath in Berl. Ent. Zeitsch., vol. xxxii, p. 499, woodcut fig. A (1888), figures from Minahassa (Celebes), *Charaxis affinis*, Butler, the left-hand side being a male (*C. affinis*), and the right-hand side a female (*C. wallacei*, Butler). This specimen is referred to in Dr. Staudinger's Ex. Schmett., p. 168 (1886). Mr. J. H. Leech in Butt. from China, Japan, and Corea, p. 436, pl. xxxiv, fig. 14 (1893), describes and figures a partially gynandrous example of *Colias hyale*, Linnæus, from Japan; and at page 441, pl. xxxv, fig. 4, of the same work, a gynandrous *Gonepteryx rhamni*, Linnæus, from Wa-shan in Western China. Finally, Herr Egon Kretzschmar in Iris, vol. vi, p. 160 (1893), records a hermaphrodite specimen of *Lethe mekara*, Moore, from "Hindostan."

#### 9. CHARAXES (*Haridra*) STAUDINGERI, Rothschild.

*C. staudingeri*, Rothschild, Iris, vol. vi, p. 349, n. 2 (1894); idem, id., Nov. Zool., vol. ii, pl. viii, fig. 2, *male* (1895); id., Butler, Journ. Linn. Soc. Lond., Zoology, vol. xxv, p. 389, n. 113 (1896); *C. durnfordi staudingeri*, Fruhstorfer, Ent. Nach., vol. xxiii, p. 236 (1897).

HABITAT: Java (*Rothschild, Butler, Fruhstorfer, and coll. de Nicéville*).

EXPANSE: ♂, 3.5 to 4.0 inches.

DESCRIPTION: MALE. UPPERSIDE, *both wings* differ from Messrs. Grose Smith and Kirby's\* and Mr. Moore's† figures of the same sex of *C. nicholii*, Grose Smith, from East Pegu, Burma, in having the ground-colour throughout dark ferruginous-brown, instead of dark brown at the base only with the outer half of the forewing blue-black. *Forewing* has both series of lunular discal white spots smaller, the inner series more or less obsolete save the two anteriormost spots; the yellowish-white longitudinal band extending nearly half-way along the inner margin in *C. nicholii* is reduced in *C. staudingeri* to a comma-shaped white spot in continuation of the outer discal series of spots; and there are no

\* Rhopalocera Exotica, pl. *Charaxes* ii, figs. 1, 2, *male* (1887).

† Lepidoptera Indica, p. 246, vol. ii, pl. clxxxii, fig. 2, *male* (1895).



white marks on the margin. *Hindwing* differs in having the outer-third of the wing pure white instead of creamy-white, this area being of much less extent than in *C. nicholii*, with its inner edge nearly straight instead of deeply indented; the series of eight diamond-shaped, black, white-centered spots on the band twice as large and very conspicuous; the marginal line much more prominent. **UNDERSIDE**, *both wings* agree almost precisely with the figure of the male of *C. durnfordi*, Distant,\* from Sungei Ujong in the Malay Peninsula; but the dark discal band of the *forewing* is broader in *C. staudingeri*.

Described from three specimens kindly sent to me by Herr G. Hoppenstedt, captured in the Preanger district, a mountainous region near Batavia in North-Western Java; and one from Mount Gede, Western Java, 4,000 ft., captured by Herr H. Frubstorfer, and kindly sent to me by him. He has quite recently described the hitherto unknown female.

10. *CHARAXES (Haridra) CONNECTENS*, n. sp., Plate III, Fig. 24, ♂.

*Charaxes (Haridra) durnfordi*, de Nicéville and Martin [*nec* Distant], Journ. A. S. B., vol. lxiv, pt. 2, p. 437, n. 262 (1895).

**HABITAT**: N.-E. Sumatra.

**EXPANSE**: ♂, 4.1 inches.

**DESCRIPTION**: **MALE**. **UPPERSIDE**, *forewing* agrees with Messrs. Grose Smith and Moore's figures of the same sex of *C. nicholii*, Grose Smith, in having the basal area of the same shade of "dark brown" (dark castaneous), but is of greater extent, occupying the whole of the discoidal cell, and reaching nearly as far as the interior of the two discal series of white spots; differs also in having two additional elongated white spots forming a commencement to a third series just behind the costa, divided by the upper discoidal nervule; both discal series of white spots are also smaller, the spots apparently further apart owing to their smaller size; and the longitudinal band on the sutural area at the outer angle almost obsolete: differs from Mr. Distant's figure of *C. durnfordi* in having the basal area very much darker, being dark castaneous instead of "dark brownish-ochraceous;" in that species also the outer angle extending some distance along the outer and inner margins is pure white, in the present species the outer angle is only obsoletely sordid white: differs from *C. staudingeri*, Rothschild, described above, in having the basal area of a distinctly lighter shade than the outer portion of the wing (which is black), in that species it is dark ferruginous-brown throughout; and in having the inner discal series of white spots complete, in *C. staudingeri* the inner series is obsolete except the two anteriormost spots; and that species does not

\* *Rhopalocera Malayana*, p. 432, n. 9, pl. xl, fig. 8, *male* (1886).



possess the two spots of the third innermost series. *Hindwing* differs from *C. nicholii* in having the dark castaneous basal area of greater extent, therein agreeing with *C. durnfordi* and *C. staudingeri*, thereby reducing the breadth of the outer white area, which is pure white as it is in *C. durnfordi* and *C. staudingeri*, instead of creamy-white as in *C. nicholii*; the inner edge of the white band very uneven as it is in *C. nicholii* and *C. durnfordi*, in *C. staudingeri* it is nearly straight; the eight white-centered submarginal black spots of the same size as in *C. durnfordi* and *C. staudingeri*, but much larger than in *C. nicholii*; the marginal dark line prominent as in *C. durnfordi* and *C. staudingeri*, in *C. nicholii* it is obsolete. **UNDERSIDE**, both wings with the ground-colour similar to that of *C. durnfordi* and *C. staudingeri*, but much lighter than in *C. nicholii*. *Forewing* has the dark discal band as broad as in *C. staudingeri*, therefore much broader than in *C. durnfordi*; in *C. nicholii* the ground-colour and markings are very obscure. *C. everetti*, Rothschild, *Iris*, vol. vi, p. 348, n. 1 (1894), and *Nov. Zool.*, vol. ii, pl. viii, fig. 1, male (1895), from the Barram River, British North Borneo, is quite distinct from *C. connectens*, the upperside of the forewing has the white markings many times larger, as also are the submarginal black white-centered spots on the hindwing, while the ground-colour of both wings on the upperside is much paler, of a much less rich chestnut or ferruginous shade.

Described from a single example in my collection. Hofrath Dr. L. Martin possessed four males and a female of this species from N.-E. Sumatra, these specimens have probably passed into the possession of the Hon. Walter Rothschild. Burma, the Malay Peninsula, Sumatra, Java, and Borneo each has a local representative of this very distinct group of the genus.

### Family LEMONIIDÆ.

#### Subfamily NEMEOBIINÆ.

#### 11. DODONA DRACON, n. sp., Plate II, Fig. 14, ♂.

**HABITAT**: North Shan States, Upper Burma.

**EXPANSE**: ♂, 1.5 inches.

**DESCRIPTION**: **MALE**. **UPPERSIDE**, both wings glossy hair-brown. *Forewing* bears on the disc numerous pale ferruginous spots, those towards the costa being whitish. *Hindwing* bears on the outer half four somewhat obscure macular pale ferruginous bands; the anal lobe is black, bisected longitudinally by an ochreous line, which line is continued along the submedian nervure almost to the base of the wing. **UNDERSIDE**, both wings clear brownish-ochreous, with pure white

markings; two subbasal decreasing white bands, commencing broadly on the forewing at the costa, ending on the submedian nervure, commencing again on the hindwing at the costa, near the anal angle approaching each other and becoming very narrow, recurved to the abdominal margin. *Forewing* with two short parallel white lines at the end of the discoidal cell; placed anteriorly midway between these two lines is a trifid white spot which reaches the costa, and posteriorly are two other spots also placed midway between the cell lines, the anterior one in the first median interspace, the posterior one placed a little outwardly as regards the spot anterior to it in the submedian interspace; beyond these two last-named spots are three other spots, the uppermost is white and is in the second median interspace, the other two are black and placed posterior to it; a trifid subapical spot from the costa to the upper discoidal nervule; a submarginal series of small white spots; and a fine white marginal line. *Hindwing* with a short narrow white line on the middle of the disc from the second subcostal to the second median nervule; two fine submarginal white lines; the anal lobe black, bisected as above by an ochreous line, the lobe anteriorly defined by a white line, anterior to this again is a fine black zigzag line extending from the abdominal margin to the second median nervule; the abdominal margin bears three fine parallel white lines, the innermost on the extreme margin. *Antennæ* black. *Thorax* and *abdomen* above black, beneath whitish. *Cilia* whitish.

Near to *D. dipœa*, Hewitson, which occurs in the Himalayas from Mussoorie to Sikkim, and again in the Naga Hills; differs therefrom in its smaller size, the clearer ochreous shade of the ground-colour on the underside, all the bands and spots being pure white instead of more or less ochreous or silvery, and the anal lobe being bisected by an ochreous line. *D. dracon* agrees very closely with the two specimens of a *Dodona* probably from Western Yunan referred to in the last paragraph of the description of *D. dipœa* in Butt. of India, vol. ii, p. 311, but those specimens are larger, the ground-colour on the underside is of a more reddish shade, and all the markings are not of so pure a white colour, nor are they quite so clearly defined.

Described from a single example taken at Kaugmong in Hsenwi, North Shan States, on 9th March, 1895, by Major F. B. Longe, R. E., who has generously presented the specimen to me.

#### Family LYCÆNIDÆ.

#### 12. CASTALIUS ROXANA, de Nicéville, Plate II, Fig. 10, ♂.

*C. roxana*, de Nicéville, Journ. Bomb. Nat. Hist. Soc., vol. x, p. 633, n. 1 (1897); id., Watson, l. c., p. 661, n. 165.

HABITAT: North Shan States and North Chin Hills, Upper Burma.

EXPANSE: ♂, 1.0 inch.

DESCRIPTION: MALE. UPPERSIDE, *both wings* white. *Forewing* with a broad basal black area which is reduced at the middle of the costa to a fine line, and gives off a small black tooth at the end of the discoidal cell; the outer margin broadly but decreasingly black; from the second median nervule to the inner margin are two conjoined round black spots, the upper the smaller, the lower joined posteriorly to the outer black margin. *Hindwing* with a submarginal series of six round black spots placed in pairs; the outer margin narrowly black. UNDERSIDE, *both wings* white. *Forewing* with an oblique basal black band which reaches the costa at about its middle; a submarginal series of conjoined rounded black spots, the series broken at the second median nervule, the portion posterior to that veinlet being shifted well towards the base of the wing; the outer margin narrowly black, bearing an obscure very fine macular white line. *Hindwing* with the base narrowly black; the three submarginal pairs of black spots as on the upperside; the margin narrowly black, including a series of small white spots. *Cilia* black.

Allied to *C. roxus*, Godart, differing therefrom (as figured by Horsfield in Cat. Lep. Mus. E. I. Co., pl. ii, figs. 4, 4a (1828), from Java), in having the white area on the upperside of the forewing somewhat larger; in the hindwing the white area is twice as extensive, permitting the appearance of the three pairs of black spots near the margin which in *C. roxus* are lost in the outer black area occupying nearly half the surface; on the hindwing on the underside there are two black spots only in the middle of the submarginal series, in *C. roxus* there are three; and the marginal series of white spots on both wings are far more prominent in *C. roxus* than in *C. roxana*. Dr. O. Staudinger in Iris, vol. ii, pp. 95, 96 (1889), has described "*Lycæna*" *roxus*, var. *angustior* from Palawan in the Philippines; *L. roxus*, var. *celebensis*, from Celebes; and *L. roxus*, var. *cohærens* from New Guinea, Timor, and Wetter. None of these varieties agree with the present form.

Described from a single example kindly given to me by Major F. B. Longe, R. E., which was captured by the donor in the Kokang State in the North Shan States on the Chinese frontier east of Bhamo, at 5,500 feet elevation. Capt. E. Y. Watson possesses another specimen from the Upper Chindwin Valley in Upper Burma, taken in March, 1893, and Colonel C. H. E. Adamson probably possesses a third specimen from Burma taken at Aloungdan Kathapa, in the Lower Chindwin District, in January.



13. *HYPOLYCÆNA DANISOIDES*, n. sp., Plate III, Fig. 21, ♀.

HABITAT: Ké Islands. [? Mansinam and Ceram, Grose Smith.]

EXPANSE: ♀, 1·4 inches.

DESCRIPTION: FEMALE. UPPERSIDE, *both wings* differ from the figure of "*Myrina*" *danis*, Felder, Reise Novara, Lep., vol. ii, p. 240, n. 273, pl. xxx, figs. 12, 13, *female* (1865), from Halmaheira (Gilolo), in having the discal white band fully twice as broad, with straighter edges, thereby greatly reducing the extent of the plumbeous ground-colour. UNDERSIDE, *both wings* have the discal white band of the same breadth as in "*M.*" *danis*, but that species as figured has its outer edge tinted with yellow, there being no trace of this colour in the species here described. MALE (also of *M. danis*) unknown.

The lunular markings on the upperside of the hindwing are most gorgeously iridescent, varying in different lights from dull leaden-blue to brilliant purple and then to emerald-green. On the underside these markings are metallic (not iridescent) pale silvery-blue.

Described from a single specimen received from Herr Heinrich Kühn. It has only two subcostal nervules to the forewing, and appears to be a true *Hypolycæna*. This is probably the species referred to by Mr. Henley Grose Smith in *Novitates Zoologicæ*, vol. i, p. 583, n. 267 (1894), under the name of *Sithon danis*, Felder, thus:—"One example from Mansinam [? Dutch N.-W. New Guinea]. The white area is more extended on both wings than in Felder's type, but I have specimens in my collection from Ceram, captured by Mr. Wallace, which agree with Mr. Doherty's specimen. Possibly it may be a distinct species." Mr. Hamilton H. Druce in *Ann. and Mag. of Nat. Hist*, sixth series, vol. xiii, p. 252 (1894) notes:—" *Myrina danis*, Felder, cannot, in my opinion, be placed in this genus [*Hypochlorosis*, Röber = *Pseudonotis*, H. H. Druce] as, besides possessing two tails and a distinct lobe to the anal angle, it presents a somewhat different arrangement of the nervules in the forewing, the costal nervure and the first subcostal nervule being bent towards each other and running side by side for some short distance. The palpi, as pointed out by Dr. Felder, are different, the third joint being longer and the second shorter; the eyes also are hairy. It is closely allied to *Hypolycæna*."

Genus BULLIS, nov.

Very close to *Britomartis*, mihi, *Journ. Bomb. Nat. Hist. Soc.*, vol. ix, p. 304 (1895), from which it differs only in the absence in the male of a large patch of androconia on the upperside of the forewing occupying the outer three-fourths of the discoidal cell, and extending into the discoidal and median interspaces; the apex of the forewing



is more produced, the outer margin consequently straighter; the second subcostal nervule arises nearer to the first than to the apex of the discoidal cell, in *Britomartis* it arises nearer to the end of the discoidal cell than to the first subcostal nervule; no third subcostal nervule. The eyes are naked. Type, *Britomartis buto*, de Nicéville, l. c., p. 308, n. 29, pl. P, fig. 41, male (*nec* female).

(1) *BULLIS BUTO*, de Nicéville.

*Britomartis buto*, de Nicéville, Journ. Bomb. Nat. Hist. Soc., vol. ix, p. 308, n. 29, pl. P, fig. 41, male (*nec* female) (1895).

HABITAT: Ataran Valley and Daunat Range, Tenasserim, Burma; N.-E. Sumatra.

14. (2) *BULLIS VALENTIA*, Swinhoe, Plate III, Figs. 18, ♂; 17, ♀.

*Tajuria valentia*, Swinhoe, Ann. and Mag. of Nat. Hist., sixth series, vol. xvii, p. 358 (1896.)

HABITAT: Cherra Punji (*Swinhoe*); Khasi Hills, Assam.

EXPANSE: ♂, 1.20; ♀, 1.15 inches.

DESCRIPTION: MALE. UPPERSIDE, *both wings* differ only from *B. buto*, de Nicéville, in having the blue coloration of a slightly richer and deeper shade and not turning to emerald-green in any light as it does in *B. buto*. UNDERSIDE, *both wings* have the ground-colour of a darker, more plumbeous, shade. *Forewing* has the narrow discal macular band or line straight, not slightly outwardly curved; it is also more irregular and broken. *Hindwing* has the marginal black spot in the first median interspace less broadly crowned with yellow of a darker shade; and the short yellow band anterior to the anal lobe is half as broad and therefore further removed from the discal line, and of a deeper shade of yellow. FEMALE. UPPERSIDE, *both wings* dull fuscous; *cilia* cinereous. *Forewing* has the discoidal cell, the base of the wing, and the disc as far as the inner margin dull blue. *Hindwing* has the costa only broadly plumbeous or dull fuscous; the abdominal margin whitish; the rest of the surface dull blue; a small obscure round marginal black spot in the first median interspace; a marginal black thread inwardly defined with a still narrower white thread extending from the anal angle as far as the blue area reaches; the anal lobe small and black, bearing outwardly a few dull blue scales. UNDERSIDE, *both wings* as in the male.

Described from nine males and one female kindly sent to me by the Rev. Walter A. Hamilton. The acquisition of both sexes of *B. valentia* makes it clear that the specimens of *B. buto* described by me are males and not females. The absence of the "male-mark" which is so conspicuous in *Britomartis cleoboides*, Elwes, led me to conclude

that my specimens were females, though the shape of the wings should have enlightened me as to their true sex. A closely allied species appears to be the "*Tajuria*" *dominus* from Kina Balu, Borneo, described by Mr. H. H. Druce in Proc. Zool. Soc. Lond., 1895, p. 600, pl. xxxiii, fig. 12, *male*, but that species has the "sexual mark" on the upperside of the forewing in the male more isolated, being outwardly bounded by a streak of the blue ground-colour, the apex of the hindwing is more broadly black; and on the underside the anal area of the hindwing is much more broadly yellow, the two patches being confluent instead of well separated. The shape of the hindwing also differs, it being much more produced at the apex in *T. dominus* than in *B. valentia*. As Mr. Druce has placed *dominus* in the genus *Tajuria* it is presumed that it has three subcostal nervules to the forewing unlike *valentia*, which has only two, though Colonel Swinhoe overlooked that fact. I had described this species as new before Colonel Swinhoe's description of it was published. I have, however, since received a specimen of his species from him, and find that the two are synonymous, so my MS. name is of course suppressed.

15. HYSUDRA (?) HADES, de Nicéville, Plate IV, Fig. 29, ♀.

*H. (?) hades*, de Nicéville, Journ. Bomb. Nat. Hist. Soc., vol. ix, p. 318, n. 34, pl. P, fig. 46, *male* (1895).

HABITAT: Daunat Range, Tenasserim, Burma.

EXPANSE: ♀, 1.5 and 1.7 inches.

DESCRIPTION: FEMALE. UPPERSIDE, *both wings* hair-brown with a distinct gloss in some lights. *Cilia* cinereous. *Forewing* somewhat paler on the disc. *Hindwing* with the costal and abdominal margins somewhat paler than the rest of the surface; the anal lobe bearing a small obscure black and dull ochreous spot. UNDERSIDE, *both wings* grey, of a paler shade than in the male, but all the markings precisely the same.

Described from two examples in my collection.

16. RAPALA ALBAPEX, n. sp., Plate III, Fig. 23, ♂.

*Deudorix domitia*, H. Druce (*nec* Hewitson), Proc. Zool. Soc. Lond., 1873, p. 353, n. 1; *Rapala domitia*, H. H. Druce, l. c., 1895, p. 624.

HABITAT: Borneo (*H. Druce*); Labuan (*H. H. Druce*); Sandakan, North Borneo.

EXPANSE: ♂, 1.65 inches.

DESCRIPTION: MALE. UPPERSIDE, *both wings* bronzy shining brown. *Forewing* with an elongated fusiform discal pale yellow streak, highly attenuated at both ends, occupying the posterior half of the discoidal cell but not reaching the base, extending beyond the cell into the lower discoidal interspace; the apex broadly dusted with white scales,

this white area ending in the middle of the first median interspace. *Hindwing* with the costa as far as the subcostal nervure and the second subcostal nervule pale yellow, with two somewhat indistinct similar streaks in the subcostal and discoidal interspaces; the apex narrowly pale yellow; the abdominal margin broadly pale yellow; the anal lobe pale yellow, outwardly with a crescent of black scales; a white anteciliary line from the anal angle to just beyond the root of the tail; *tail* black with a white tip. *Cilia* of the forewing from the apex as far as the first median nervule white, with a prominent anteciliary black thread, posteriorly black; of the hindwing pale yellow at the apex, thence to the anal angle black. *UNDERSIDE, both wings* pale yellow. *Forewing* with the inner margin whitish centred with fuscous; a large prominent black spot crossing the middle of the discoidal cell; a similar wedge-shaped one at the middle of the costa; and a smaller round one in the second median interspace; a prominent anteciliary black thread; the sexual tuft of hairs from the inner margin near the base of the wing turned under and forwards rather small and deep black. *Hindwing* with an elongated oval marking anterior to the anal angle commencing from the internal nervure, consisting of a pale yellow centre, bounded by a black line, and then an equally broad bluish-white line, this ring-spot gives off outwardly a short black line, which is posteriorly defined by a bluish-white line; a marginal black fascia, commencing very narrowly at the lower subcostal nervule, increasing in width till it reaches the third median nervule; in the submedian interspace a little removed from the margin is a clump of irrorated black scales; the anal lobe is black, crowned with a clump of pale silvery-greenish scales. *Cilia* of the forewing anteriorly whitish, posteriorly black; of the hindwing anteriorly as far as the lower subcostal nervule pale yellow, thence to the second median nervule black, thence to the anal angle white tipped with black. *Antennæ* black, but the base of the club white. *Frons* and *palpi* pale yellow; a pale yellow line surrounding the eyes. *Body* above dark brown, beneath and *legs* pale yellow.

Mr. H. H. Druce has (l. c.) given a short description of this species, but did not name it. It can at a glance be distinguished from "*Deudorix*" *domitia*, Hewitson, from Malacca (*Butler* and *Staudinger*), Singapore (*Hewitson*), Sumatra (*Grose Smith*), Kepran, N.-E. Sumatra (*de Nicéville* and *Martin*), and Billiton Island (*Snellen*), by the pale yellow markings of both wings on the upperside, and by the apical white patch on the forewing; on the underside the ground-colour is of a much paler shade of yellow.

Described from a single example kindly given to me by Mr. E. F. Skertchly, who captured it at Sandakan on the 10th May, 1888.



## Family PAPILIONIDÆ.

## Subfamily PIERINÆ.

17. *DELIAS DIVES*, n. sp., Plate I, Fig. 1, ♂.

HABITAT: Penang.

EXPANSE: ♂, 2·6 inches.

DESCRIPTION: MALE. UPPERSIDE, *both wings* chalky-white, all the veins black. *Forewing* with the discoidal cell, especially outwardly, slightly dusted with black scales; the outer margin black, this black border extending along the veins for a short distance, the area between this black border and the end of the cell heavily sprinkled with black scales. *Hindwing* unmarked, except that the outer margin is narrowly black. UNDERSIDE, *forewing* white; the costa broadly extending into the discoidal cell and all the veins heavily bordered with black, so that the ground-colour is reduced to narrow streaks between the veins; a subapical series of five prominent cordate white spots from the costa to the second median interspace, the first spot small, the second the largest, the rest decreasing in size, these spots shew through faintly on the upperside. *Hindwing* chrome-yellow; all the veins narrowly but prominently defined with black; the outer margin narrowly black inwardly defined by white spots between the veins.

Allied to *D. agostina*, Hewitson, from Sikkim, Bhutan, Assam and Upper Burma, from the same sex of which it differs on the upperside in having the forewing heavily infuscated on the outer half, on the underside of that wing in having the series of subapical spots smaller and fewer in number, the second spot of *D. agostina* being absent in *D. dives*; on the hindwing in having all the veins conspicuously defined with black, and with no submarginal black line inwardly defining the series of marginal white spots as there is in *D. agostina*. Other more distantly allied species are *D. themis*, Hewitson, from the Philippines, *D. cathara*, Grose Smith, from Kina Balu mountain in North Borneo, and *D. agoranis*, Grose Smith, from Burma. The *D. singhapura* of Wallace, from Singapore, Sumatra and North Borneo, is also closely allied, but the apex of the forewing as figured—the male by Wallace and the female by Grose Smith and Kirby—is greatly produced, and the black border to the hindwing on the underside is twice as broad, and encloses a row of six paired whitish spots between the veins. Herr H. Fruhstorfer has recently briefly described in "Societas Entomologica," p. (1897), *Delias singhapura*, subspecies *distincta*, from the Province Amuntai in South Borneo, which probably is another allied species, but without a figure it is difficult to make out exactly what it is like, especially as nothing is said about its outline.

Described from a single example in my collection.



18. *PARAPIERIS*\* *CHUMBIENSIS*, n. sp., Plate I, Fig. 6, ♂.

*Pieris* (*Aporia*?) *marshalli*, Elwes, MS., ? = *dubernardi* [sic], Oberthür, Nature, vol. xxxiv, p. 597 (1886); *Pieris dubernardi*, Elwes (nec Oberthür), Trans. Ent. Soc. Lond., 1888, p. 415, n. 375.

HABITAT: Chumbi Valley, Eastern Thibet.

EXPANSE: ♂, 2·2 inches.

DESCRIPTION: MALE. UPPERSIDE, *both wings* pure dead chalky-white; the base thickly sprinkled with black scales. *Forewing* with a small black spot on the lower disco-cellular nervule; the costa very narrowly black; the apex widely black, this black colour rapidly decreasing on the outer margin till at the termination of the first median nervule it entirely disappears, the black colour extending narrowly along the veins on to the disc of the wing; a large round black spot on the middle of the second median interspace bounded by the veins; posterior to this spot is a small clump of black scales. *Hindwing* with the veins sometimes very narrowly black; a large round apical black spot placed between the subcostal nervules; with sometimes three discal small round black spots in the middle of each interspace posterior to the subapical spot. UNDERSIDE, *forewing* with the ground-colour pure dead chalky-white; all the veins narrowly black, the disco-cellular spot larger than on the upperside, covering both the disco-cellular nervules; the apex and outer margin narrowly and decreasingly ochreous; all the veins black, that colour widening out on the veins as they reach the outer margin; the round black spot in the second median interspace as on the upperside; in continuation of which to the submedian nervure is a narrow streak of powdery black scales. *Hindwing* with the base of the costa rich chrome-yellow; the rest of the wing ochreous; all the veins broadly defined with black; with a powdery rather indistinct curved discal black band, the bifurcated streak in the submedian interspace as far as the discal band only rich chrome-yellow. *Cilia* throughout white. FEMALE unknown.

Differs from the same sex of *Pieris dubernardi*, Oberthür,† (to judge from his figure only, I have not seen a specimen) on the upperside of the forewing in the costa being less black, there is a line of the white ground-

\* The genus *Parapieris* I propose for *Papilio callidice*, Esper (the type), and its allies. A full description of it will appear in vol. iv of "The Butterflies of India, Burmah and Ceylon" by myself. *P. chumbiensis* doubtfully belongs to the genus *Parapieris*, but I do not know any described genus in which it could be more appropriately placed.

† *Pieris dubernardi*, Oberthür, Études d'Entomologie, vol. ix, p. 13, pl. i, fig. 6, male (1884); *Aporia dubernardi*, Leech, Butt. from China, p. 467, pl. xxxvi, fig. 8, female (1894).

colour between the black costa and subcostal nervure, in *P. dubernardi* the costa is entirely black as far as that vein; the discal black spots are smaller and isolated, in *P. dubernardi* they are conjoined; on the hindwing the discal spots are all smaller, in the type the apical one is alone present; on the underside of the forewing the black spot at the end of the discoidal cell is larger and much more prominent, the discal black spots are much smaller and all isolated instead of being conjoined into a broad black fascia; the ground-colour of the apex of the forewing and the entire hindwing is of a different shade of yellow, in *P. chumbiensis* it is ochreous, in *P. dubernardi* it is "canary and nankin yellow;" and lastly the shape of the wings is quite different, being much shorter in the present insect, giving it a much more "chubby" appearance, in *P. chumbiensis* the forewing measures 26 mm., in *P. dubernardi* 31 mm., while the breadth of the wings is the same in both species.

"This species is only known to me from some eight or nine specimens, which were brought by a native employed by the late Capt. Harman, R. E., in surveying the Tibetan frontier, and may not occur on this side of the passes. It agrees very well with Oberthür's figure and description, taken from two specimens obtained at Tsekou, in Eastern Thibet, which, like my own, were all males." (*Elwes*, l.c., in *Trans. Ent. Soc. Lond.*) From these eight or nine specimens mentioned above Mr. Elwes has presented two to the Indian Museum, Calcutta, and they constitute the types. The species does not seem to have been met with again, and its exact habitat is not known, but as this side of the passes has been well explored entomologically the butterfly probably does not occur in British territory but in the Chumbi Valley, just across the dividing pass between Native Sikkim and Thibet. *P. dubernardi* is found in Tsékou, Ta-chien-lu, Ni-tou, Wa-ssu-kow, and Chow-pin-sa, in Western China.

19. *GONEPTERYX ZANEKOIDES*, n. sp., Plate I, Figs. 2, ♂; 7, ♀.

HABITAT: South Chin Hills, Upper Burma.

EXPANSE: ♂, ♀, 2.1 inches.

DESCRIPTION: Very near to *G. zaneka*, Moore, from the Western Himalayas. MALE. Differs from the same sex of that species in having the forewing markedly broader, the costal margin not constricted at half its length\* but straight, the apex not so produced. Hindwing distinctly broader than in *G. zaneka*, almost of the same shade of brimstone as the forewing, the outer slightly paler than the basal half of the wing, in *G. zaneka* it is pale cream-colour of a uniform shade. FEMALE. Forewing agrees in shape with that of the male, consequently differs from the

\* Mr. Moore says that this is so in *G. zaneka*, by which I presume he means that the costa is slightly excavated in the middle, which is the fact.

same sex of *G. zaneka* in being broader, with a straight instead of excavated costa, and the apex less produced. *Hindwing* also broader than in *G. zaneka*. Otherwise similar to *G. zaneka*. The highly dentate hindwing in both sexes will distinguish *G. zaneka* and *G. zaneoides* from *G. aspasia*, Ménétrières.

Mr. Moore's figure of *G. zaneka* (Proc. Zool. Soc. Lond., 1865, p. 493, n. 35, pl. xxxi, fig. 18) is very bad; though the sexes are so different, I am unable to say which sex he has figured, and he does not furnish the information. Mr. Leech (Butt. China, p. 444 (1894) says that *G. zaneka* "Is probably only a local race" of *G. aspasia*, while it is with extreme doubt he allows the latter species specific rank, but says that it is probably a variety only of *G. rhamni*, Linnæus. As far as India goes, however, *G. zaneka* and *G. rhamni* are absolutely distinct species, the male of the former can instantly be detected by its small size, difference in the colour of the wings, and the highly scalloped hindwing; while the female is markedly smaller, and also has the hindwing scalloped.

I am indebted to Capt. E. Y. Watson for a pair of this species, which were captured by Mr. L. A. Thruston at 7,000 feet elevation in the Southern Chin Hills during the rains. Capt. Watson has a second male specimen in his collection. Geographically *G. zaneka* and *G. zaneoides* are widely separated, and it is highly improbable that any species linking them together will be found in the mountains which lie between the Western Himalayas and Upper Burma.

#### Subfamily PAPILIONINÆ.

#### 20. PAPILIO (*Byasa*) POLLA, de Nicéville, Plate IV, Fig. 28, ♂.

*P. (Byasa) polla*, de Nicéville, Journ. Bomb. Nat. Hist. Soc., vol. x, p. 633, n. 2 (1897); id., Watson, l. c., p. 671, n. 235.

HABITAT: North Shan States; North Chin Hills, 5,000 feet.

EXPANSE: ♂, 5.0 inches.

DESCRIPTION: MALE. UPPERSIDE, *both wings* shining black. *Forewing* with the usual three deep black longitudinal streaks in the discoidal cell, and similar ones between the veins on the disc. *Hindwing* with a large discal pinkish-white patch, the patch occupying the outer end of the cell, anteriorly bounded by the second subcostal, posteriorly by the first median nervule, the inner half of the portion in the first median interspace being heavily sprinkled with black scales, the outer edge of the patch is scalloped; four large submarginal carmine lunules all irrorated with black scales, the anterior one in the subcostal interspace whitish; *tail* broadly tipped with carmine; the posterior end of the abdominal fold and the two tooth-like projections of the wing-membrane between it and the tail, as well as the first



projection beyond the tail, somewhat broadly edged with carmine. **UNDERSIDE**, both wings as above but of a duller shade of black. *Forewing* as on the upperside. *Hindwing* with the discal pinkish-white patch extending quite up to the cell but not invading its outer end, the patch is inwardly continued from the first median nervule to the submedian nervure by a carmine spot; the submarginal lunules as above but of a pure rich carmine, the two interior ones continued to the outer marginal carmine edging to the wing, which latter is broader than on the upperside, as also is the carmine tip to the tail. *Palpi, orbits, head, and thorax* anteriorly carmine; *thorax* posteriorly and *abdomen* above black; *thorax* and *abdomen* beneath carmine; *anal valves* carmine; *antennæ* and *legs* black.

Very near to *P. (Byasa) latreillei*, Donovan (= *P. minereus*, Gray), of which I have good series of males from Tehri Garhwal and Sikkim; differing therefrom on the upperside of the hindwing in the discal white patch being larger (placed further from the outer margin), extending into the discoidal cell instead of ending (as a rule) considerably before the end, and occupying anteriorly an additional interspace, in *P. latreillei* the patch is bounded in front by the discoidal nervule, in *P. polla* it reaches the second subcostal nervule; by the outer margin and the end of the tail being broadly edged with carmine instead of having black cilia only; on the underside of the hindwing in *P. latreillei* there is invariably a small white marginal spot in the subcostal interspace which is wanting in *P. polla*; sometimes in *P. latreillei* there are two small white spots, sometimes one only, usually none, in the discoidal interspace in continuation of the discal white patch, these in *P. polla* being developed into a very large quadrate white spot, which is, in fact, much the largest spot of the four forming the patch; the broad carmine margin is also very distinctive of *P. polla*, being wholly absent in the allied species.

Described from a single male for which I am indebted to Major F. B. Longe, R. E., captured in the Kokang State, 3,500 feet, in the North Shan States, on the Chinese frontier east of Bhamo, on 5th April, 1895, also from an exceedingly worn and faded female in Captain E. Y. Watson's collection caught in the North Chin Hills of Upper Burma at 5,000 feet elevation in the rains. The latter appears to differ only from the male on the upperside of the hindwing in the white patch being continued posteriorly to the abdominal margin, or nearly so, and not reaching into the end of the cell.

21. *PAPILIO (Sarbaria) DODDSI*, Janet, Plate IV, Fig. 30, ♂.

*Papilio doddsi*, Janet, Bull. Soc. Ent. France, 1896, pp. 186, 215.

**HABITAT**: Tonkin (Janet); South Shan States.

EXPANSE: ♂, 5.1 to 5.5 inches.

DESCRIPTION: MALE. UPPERSIDE, both wings black. Forewing a little transparent, somewhat sparsely sprinkled throughout (except narrowly along the outer margin) with rich deep green scales which are highly deciduous and easily removed; the usual three longitudinal deep black streaks in the discoidal cell, and similar streaks on the disc between the veins; the outer two-thirds of the submedian nervure, the first and second median nervules, and a similar streak in the submedian interspace bearing feather-like lengthened scales which are certainly a male secondary sexual character. Hindwing with the anterior half rich dark purple sprinkled as in the forewing with green scales; the outer half of the wing also similarly but more thickly sprinkled; an anal deep red ocellus with a large black centre in the submedian interspace, bearing in the middle of the red portion anteriorly an obscure violet line; an exactly similar lunule on the margin in the first median interspace; and traces of similar lunules in the second median and discoidal interspaces. UNDERSIDE, forewing with the base black, the outer two-thirds whitish, becoming black again narrowly on the outer margin and widely at the apex; four prominent black streaks in the cell, with similar streaks between the veins on the disc. Hindwing deep black, the base and abdominal margin sparsely sprinkled with dull green scales; a prominent complete series of seven submarginal deep red lunules, each bearing anteriorly a violet line, the two anal ones developed into ocelli with large round black centres. Cilia black, but the internervular incisions white. Head, thorax and body above black, sprinkled with green.

Superficially resembling *P. (Pangeranopsis) elephenor*, Doubleday, of which I possess specimens from Jorehât and Cachar in the Assam province, and from Manipur, from which *P. doddsi* differs in the hindwing being one-third broader, the wing-membrane being produced into a very short and blunt tail-like projection at the termination of the second median nervule, in *P. elephenor* the hindwing is quadridentate; on the underside of the hindwing in having a complete series of submarginal red lunules, in *P. elephenor* the lunule in the second median interspace is entirely absent (*vide* Westwood's figure in Cab. Or. Ent., pl. xxxi, fig. 2\*, male) or obsolete; and, most important of all, *P. elephenor* has the palpi, the orbits and the head beneath dark ochreous, and the abdomen at the base beneath and broadly along each side paler ochreous, while all these parts in *P. doddsi* are black. *P. doddsi* is almost precisely similar to *P. dialis*, Leech, from Western China, Butt. China, p. 532, pl. xxxii, fig. 4, male (1894), but that species has a long spatulate tail which in *P. doddsi* is reduced to a mere tooth. Though

superficially this species is nearest to *P. elephenor*, it is probably biologically more closely allied to *P. bianor*, Cramer, from China and Japan, and its allies, all of which have long tails.

I possess a single male of this very beautiful and interesting butterfly which I owe to the kindness of Col. Woodthorpe, R. E., who captured it near the Siamese frontier when with the Anglo-French Boundary Commission.

Since the above was written I find that this species has been described by M. Armand Janet, who quite correctly points out that it is probably a tailless form of *P. (Sarbaria) bianor*. It has, however, the sexual cottony streaks far smaller and very inconspicuous instead of large and striking. Major F. B. Longe, R. E., has also very kindly given me a single male of *Euplectamima (Zethera, Janet) noirei*, Janet, from the Nam Lim Valley, in the South Shan States, 2,500 feet, also captured by the officers of the above-named boundary commission and described in the same paper as *P. doddsi* (p. 216).

22. *PAPILIO (Paranticopsis) POLYNICES*, n. sp.

HABITAT: Sikkim; Upper Burma (Rothschild).

EXPANSE: ♂, 3·4; ♀, 3·8 inches.

DESCRIPTION: MALE. Does not differ from the same sex of *P. indicus* Rothschild.\* FEMALE. UPPERSIDE, *forewing* differs from that sex of *P. indicus* in being like its own male; i.e., in having all the normal hyaline markings present, in the female of *P. indicus* the submarginal series of nine rounded spots only are present, the rest of the wing being fuliginous. *Hindwing* has the hyaline markings rather broader than in *P. indicus*. UNDERSIDE, *forewing* as on the upperside. *Hindwing* as on the upperside has the castaneous-fuscous ground-colour less extensive, the hyaline markings therefore being broader.

This species (or subspecies according to Mr. Rothschild's views) is based on the female sex, which I have from Sikkim only. Mr. Rothschild records a female from Upper Burma received from Mr. H. Fruhstorfer; this locality requires confirmation I think before it is finally accepted. Of *P. indicus* I have females from the Khasi Hills only, but none from Burma, where the males are common.

23. *PAPILIO (Paranticopsis) PHRONTIS*, n. sp.

HABITAT: Sikkim; Bhutan.

EXPANSE: ♂, 2·8 to 4·2; ♀, 4·5 to 4·6 inches.

DESCRIPTION: MALE. Does not differ from the same sex of *P. xenocles*, Doubleday. FEMALE. UPPERSIDE, *forewing* differs from the same sex of *P. xenocles* in being like its own male; i.e., in having all

\* *P. macareus indicus*, Rothschild, Nov. Zool., vol. ii, p. 457 (1895); vol. iii, p. 68, n. 202 (b) (1896).



the normal hyaline markings present and large, in *P. xenocles* they are smaller, and those in the discoidal cell and the four rounded spots immediately beyond it are sometimes nearly obliterated, though in some specimens they are all, or nearly all, fully developed; moreover in *P. xenocles* the ground-colour is browner, less fuscous, than in *P. phrontis*, and usually has a bluish tint or gloss which it never has in the latter. *Hindwing* differs in having the ground-colour of a more castaneous, less fuscous, colour, the anal chrome-yellow spot about four times as large, with all the hyaline markings more extensive, the one in the discoidal cell usually entire instead of being prominently divided into two markings. **UNDERSIDE**, *both wings* have the ground-colour paler, and the hyaline markings larger, and all more fully developed, instead of being more or less obliterated as they are in *P. xenocles*. *Hindwing* has the anal chrome-yellow spot many times larger.

Mr. Rothschild in Nov. Zool., vol. ii, p. 458, n. 203 (1895) notes that "If the Assam [and Burma] females are all of the dark colour, and the Sikkim and Bhutan females of the light colour, *P. xenocles* must be divided into two local races, of which the Assamese [and Burmese] one would be typical." I possess three females from Sikkim of *P. phrontis*, and eight females from the Khasi Hills and Tenasserim of *P. xenocles*, all of which appear to be quite constant to their respective regions, so that I am of opinion that they represent two distinct species or local races, rather than that the females are dimorphic, of which latter view of the facts there appears to be no evidence, though Mr. Rothschild says that the female of *P. xenocles* "is dimorphic."

#### Family HESPERIIDÆ.

##### 24. ODINA ORTYGIA, de Nicéville, Plate II, Fig. 15, ♂.

*O. ortygia*, de Nicéville, Journ. A. S. B., vol. lxiv, pt. 2, p. 531 (1896).

**HABITAT**: Daunat Range, Tenasserim, Burma.

**EXPANSE**: ♂, 1.45 inches.

**DESCRIPTION**: **MALE**. **UPPERSIDE**, *both wings* rich orange with black markings. *Forewing* with most of the veins outlined in black; the costa narrowly black, the apex widely black, the outer margin narrowly black; the inner margin still more narrowly black; the rest of the wing broken up by narrow black lines into spots of the ground-colour of various sizes and shapes. *Hindwing* with the costal, outer and abdominal margins all narrowly black, the rest of the surface broken up into irregular tessellations by intervening black lines. **UNDERSIDE**, *both wings* marked precisely as on the upperside. *Antennæ* black, the club (all except the whip-like point) almost entirely shining white beneath. *Palpi* black above, orange beneath. *Head* orange, but with a

narrow black line connecting the bases of the antennæ. *Thorax* orange, but streaked and barred with black. *Abdomen* orange, ringed above with black, the apex black. *Legs* mixed orange and black.

This species is probably the one recorded from India by Capt. E. Y. Watson as *Odina hieroglyphica*, Butler, in Journ. Bomb. Nat. Hist. Soc., vol. ix, p. 422 (1895), on the authority of a specimen so named in Colonel C. H. E. Adamson's MS. list of his collection from Tounggya Sekkan, Upper Tenasserim, captured in February, 1881. *O. ortygia* is nearest to the specimen figured by Distant in Rhop. Malay., p. 470, n. 2, pl. xlv, fig. 25 (1886), as "*Plastingia*" *hieroglyphica*, Butler, from Perak, but that figure shews the black bands on the wings on both surfaces twice as wide. It is more distantly allied to the true "*Plastingia*" *hieroglyphica*, Butler, from Sarawak (Borneo), from which it differs on both sides in all the black markings being even more greatly reduced than in the Malayan Peninsula form, all the orange markings therefore greatly enlarged. It may be said (to judge from Mr. Butler's figure of that species) that it is a black insect with yellow spots, while *O. ortygia* is a yellow insect with narrow black lines dividing the surface into irregular orange tessellations. Dr. Martin and I have recorded *O. hieroglyphica* from a single specimen from N.-E. Sumatra, but that specimen is not available to me for comparison, being now in the collection of the Hon. Walter Rothschild. Lastly, Herr Georg Semper in Schmett. Philipp., p. 314, n. 472, pl. xlix, fig. 11, *male* (1892), has described "*Plastingia*" *cuneiformis* from a single male from Mindoro in the Philippine Isles, which differs from *O. ortygia* in having the black areas still more largely developed even than in the Bornean *O. hieroglyphica*. All the species of this group seem to be excessively rare, I know of only six recorded examples. The type of the genus is *Odina chrysomelæna*, Mabille, Bull. Soc. Ent. Belgique, vol. xxxv, p. cxiii (1891), from Mangkassar (Macassar) in Celebes, which is probably quite distinct from the other described species, though it is difficult to say how it differs from them as M. Mabille's description is very short and is non-comparative.

Described from a single example in my collection.

#### Genus INESSA, nov.

MALE. FOREWING, *costa* very straight, if anything very slightly emarginate in the middle; *apex* acute; *outer margin* convex; *inner angle* acute; *inner margin* straight; *costal nervure* short, ending on the *costa* long before the upper end of the discoidal cell; *subcostal nervules* arising at progressively decreasing distances apart; *discoidal cell* narrow, short, extending to beyond the middle of the wing; *upper disco-cellular*

*nervule* strongly outwardly oblique; *middle* disco-cellular long, strongly inwardly oblique; *lower* disco-cellular short, upright; *lower discoidal* nervule arising much nearer to the third median than to the upper discoidal nervule; *third median* nervule arising at the lower end of the cell; *second* median arising well before the lower end of the cell; *first* median arising about twice as far from the second as the second does from the third; *submedian* nervule straight; *secondary sexual character* consists of an indistinct oblique discal streak of black modified scales arising about the middle of the submedian nervule and ending on the third median nervule near its origin, thus crossing three interspaces. HIND-WING, considerably longer than broad; *costa* well arched throughout; *apex* rounded; *outer margin* rounded; *anal angle* rather acute; *abdominal margin* slightly convex; *costal nervule* slightly curved only, ending at the apex of the wing; *first subcostal nervule* arising well before the upper end of the cell; *second* subcostal arising at the end of the cell; *disco-cellular* nervules straight, outwardly oblique; *discoidal* nervule wanting; *third median* nervule arising at the lower end of the cell; *second* median arising just before its end; *first* median arising about twice as far from the second as the second does from the third—all the median nervules arising close to the lower end of the cell; *submedian* and *internal nervures* straight. ANTENNÆ long, more than half but less than two-thirds as long as the costa of the forewing, with an elongated, well-formed club, the terminal crook (which is at right-angles to the shaft) about as long as the broadest part of the club. PALPI wanting. THORAX moderately stout. ABDOMEN slender, reaching a little beyond the outer margin of the hindwing. LEGS, foreleg, tibia with an epiphysis; hindleg, tibia with terminal and medial pairs of spurs. Type, *Inessa ilion*, de Nicéville.

This genus would appear to come near to *Isoteinon*, Felder, *Idmon*, de Nicéville, *Arnetta*, Watson, *Itys*, de Nicéville, *Zographetus*, Watson, and *Isma*, Distant,\* but the loss of the palpi in the type makes it difficult to exactly locate it; the secondary sexual character will distinguish it from them all however.

25. *INESSA ILION*, n. sp., Plate IV, Fig. 33, ♂.

HABITAT: Lombok.

EXPANSE: ♂, 1.3 inches.

DESCRIPTION: MALE. UPPERSIDE, *both wings* shining fuscous, in

\* Mr. Osbert Salvin writes to me that the unique type of the genus *Isma* (*obscura*, Distant), "Has a small tuft of hair on the upperside of the hindwing placed on the subcostal nervule along the upper edge of the discoidal cell; on the underside of the forewing near the middle of the inner margin in another tuft; the anal angle of the hindwing is very distinctly fringed as in the genus *Lophoides*, Watson."



some lights the whole surface of a beautiful vinous colour; the markings translucent and colourless. *Forewing* with an elongated streak in the discoidal cell not reaching the base, inwardly ending in a fine point, outwardly broad, lying along the median nervure, its outer end touching a much smaller spot which reaches the subcostal nervure; three conjoined subapical dots, the middle one out of line with the rest, nearer the base of the wing; a series of four small discal spots placed in a straight inwardly-oblique line, the anteriormost the smallest, placed in the lower discoidal interspace, the next two increasingly larger in the median interspaces placed outwardly against the black sexual brand, the lowermost also placed outwardly against the brand, in the submedian interspace, touching that vein, small; an opaque ochreous streak along the basal half of the sutural area. *Hindwing* with a small spot in the middle of the discoidal cell; a very irregular discal band, formed of four portions, divided only from one another by the crossing veins; the anteriormost portion in the lower discoidal interspace somewhat quadrate; the two following portions elongated, out of line with the rest, projected towards the base of the wing, the anterior of the two rather the longer; the posteriormost portion in the submedian interspace somewhat hour-glass shaped, that is to say constricted in the middle on both sides, but that portion nearer the abdominal margin is larger than that portion touching the first median nervule. **UNDERSIDE**, *both wings* fuscous, without any purple gloss. *Forewing* marked as on the upperside, except that the opaque streak in the sutural area is absent. *Hindwing* as on the upperside.

Described from a single example kindly given to me by Herr H. Fruhstorfer, and captured by him in the eastern province of Lombok at 2,000 feet elevation in April, 1896.

26. *ISMA IDYALIS*, n. sp., Plate IV, Figs. 26, ♂; 32, ♀.

**HABITAT**: Burma; Java.

**EXPANSE**: ♂, 1·2 to 1·3; ♀, 1·6 inches.

**DESCRIPTION**: **MALE**. **UPPERSIDE**, *both wings* fuscous with a vinous gloss; and with subhyaline lustrous pale ochreous spots. *Forewing* with two elongated spots towards the outer end of the discoidal cell, the lower immediately below the upper and about twice as large; two or three subapical dots, the lower when present nearer the outer margin than the other two (which are immediately one above the other), and the smallest; three increasing discal spots; the uppermost in the lower discoidal interspace a mere dot; the middle one much larger, triangular, filling the base of the second median interspace; the lowermost very large, quadrate, in the lower median interspace, its outer edge concave, its inner edge convex; a rounded spot in the middle of the submedian

interspace, touching the submedian nervure. *Hindwing* with three conjugated spots in the middle of the disc, the middle one nearest the outer margin, the innermost one the largest. *UNDERSIDE*, both wings fuscous, thickly irrorated or overlaid with ochreous scales. *Forewing* with the inner margin extending broadly on to the disc fuscous; the spots as on the upperside, except that the one in the submedian interspace is larger with diffused edges. *Hindwing* as on the upperside. *Cilia* pale ochreous-fuscous throughout. *Antennæ* black, the tip of the club, excluding the whip-like tip, shining white beneath. *FEMALE*. *UPPERSIDE*, both wings fuscous, lacking altogether the vinous gloss of the male, the base irrorated with ochreous scales. Otherwise as in the male.

Near to *Isma bononia*, Hewitson, described from Singapore, in my collection from Perak and N.-E. Sumatra, but that species has typically no spots in the discoidal cell of the forewing. Also near to *Isma inarime*, de Nicéville, from Perak, N.-E. Sumatra, Java, and Pulo Laut, but the spots on the hindwing are smaller and differently shaped; they are also more numerous in that species. Also near to *Isma feralia*, Hewitson, described from Java, occurs also in N.-E. Sumatra and Pulo Laut, but in that species all the spots are pure translucent white instead of lustrous pale ochreous, and the spot in the submedian interspace of the forewing is quadrate and extends right across the space instead of being round and touching the submedian nervure, reaching only to the middle of the interspace. Also probably near to *Isma obscura*, Distant, from Singapore, but that species has one spot only in the discoidal cell of the forewing, and none on the hindwing on the disc. Also near to *Isma submaculata*, Staudinger, described from Palawan in the Philippine Isles, but in my collection from Karwar, North Kanara, Bombay Presidency; Cachar in Assam; Daunat Range, Tenasserim, Burma; Perak in the Malay Peninsula; N.-E. Sumatra; and Pulo Laut, but that species has no translucent spots whatever on the hindwing. The only other species of the genus known to me is *Isma corissa*, Hewitson = *Isoteinon indrasana*, Elwes and de Nicéville, from Burma, N.-E. Sumatra, Java, and Pulo Laut, which is altogether a differently-coloured and marked species from the rest of the genus.\*

Described from three males from Tounghoo and one from the Daunat Range, both in Burma, and two females from Java. The type is from Burma. I have not received both sexes from one locality, and it may be that the Javan is distinct from the Burmese species, the former having

\* See footnote on p. 571 *ante*. None of the species here mentioned of the genus *Isma* have male secondary sexual characters, and are therefore probably generically distinct.

the two spots in the discoidal cell of the forewing placed nearer the base of the wing, the inner edge of the discal spot in the first median interspace being much nearer the outer than the inner edge of the spots in the cell than in the Burmese specimens, in the latter they are more immediately anterior to the large discal spot, the inner edge of the three spots being almost in a straight line and perpendicular to the inner margin.

27. *PIRDANA DISTANTI*, Staudinger, Plate II, Figs. 16, ♂; 13, ♀.

*P. (Hesperia) distanti*, Staudinger, Iris, vol. ii, p. 141 (1889); *P. pavona*, de Nicéville, Journ. A. S. B., vol. lxiv, pt. 2, p. 540, n. 683 (1896); ? *P. rudolphei* [sic] Elwes, Proc. Zool. Soc. Lond., 1892, p. 618.

HABITAT: Malacca; North Borneo (*Staudinger*); Karen Hills; Perak (*Elwes*); Perak, Malay Peninsula; N.-E. Sumatra; Java.

I have described this species very fully in the paper above quoted, so it is unnecessary to redescribe it here, but I take the opportunity to figure it now.

Dr. O. Staudinger in Iris, vol. ii, p. 141 (1889), describes a *Pirdana (Hesperia) distanti* from a female from Malacca, which is the same specimen which was identified by Hewitson as *Hesperia ismene*, Felder, and by Distant as the male (probably) of *Pirdana hyela*, Hewitson. From Staudinger's description of this specimen *P. distanti* differs from *P. pavona* in having the upperside "dull dark smoke-brown, consequently quite different from the black, and green in the basal area, of *P. hyela*." But the male of *P. pavona* (not the female) agrees with this description, the female *P. pavona* agreeing with the same sex of all the species of the genus known to me in having the basal areas of both wings on the upperside glossed with deep shining steel bluish-green. I should say therefore that Distant was right in considering the type of *P. distanti* to be a male and not a female as Staudinger says it is; if Distant is right my *P. pavona* will sink as a synonym of *P. distanti*. But should the type of *P. distanti* be a female, my species will stand, as the female of *P. pavona* is quite distinct from the female of *P. distanti*.

P.S. Since the above was in type, Dr. Staudinger has most kindly sent me a coloured drawing of the type of his species, which proves to be the MALE of my *P. pavona*, the latter name therefore sinking as a synonym. He writes to me that he has another specimen from North Borneo exactly like the type, and one other from Preanger, West Java, which is a little different.

28. *PADRAONA PARAGOLA*, de Nicéville, Plate IV, Figs. 25, ♂; 31, ♀.

*P. paragola*, de Nicéville, Journ. A. S. B., vol. lxiv, pt. 2, p. 546, n. 715 (1896).

HABITAT: N.-E. Sumatra.

Having described this species very fully in the paper quoted above



I will not repeat the description here, but take this opportunity to figure both sexes.

29. *HALPE HYRTACUS*, n. sp., Plate III, Fig. 22, ♂.

HABITAT: Wynaad; North Kanara—both in South India.

EXPANSE: ♂, 1·3 to 1·5; ♀, 1·6 inches.

DESCRIPTION: MALE. UPPERSIDE, *both wings* and *cilia* shining dark hair-brown. *Forewing* with two dots placed obliquely outwards towards the end of the discoidal cell, one or both sometimes absent; three conjugated subapical dots, and two on the disc at the bases of the median interspaces, all these dots colourless and transparent; the "male-mark" shining deep black and narrow. *Hindwing* immaculate. UNDERSIDE, *both wings* dull fuscous. *Forewing* with the transparent dots as on the upperside; the inner margin very broadly white crossed in the middle by the "male-mark;" the costa outwardly tinted with ochreous; the apex bearing some obscure elongated dark dashes outwardly bordered with ochreous. *Hindwing* bearing a broad discal pure white band, broadest on the abdominal margin, not reaching the costa, anteriorly marked with one or two dark brown dots, sometimes with two or three in the middle; the outer dark half of the wing bearing some obscure ochreous spots. *Palpi* above, *thorax* and *abdomen* concolorous with the wings, beneath and *legs* yellowish-white. FEMALE. UPPERSIDE, *both wings* as in the male, but the ground-colour paler. *Forewing* with no "male-mark." UNDERSIDE, *both wings* as in the male.

Nearest to *Halpe brunnea*, Moore, Lep. Cey., vol. i, p. 174, pl. lxx, figs. 4, 4a, *female* (1881), with which it agrees closely on the upperside except that the transparent dots are even smaller than in the same sex of that species; the "male-mark" is quite the same; differing, however, on the underside by the presence of the large white area on the inner margin of the forewing, and the broad discal white band on the hindwing. *H. hyrtacus* is a very distinct species, and cannot be confounded with any other.

Described from a single example kindly given to me by Mr. V. S. Fellowes Wilson, who captured it at Pandalur in the Wynaad District on the 2nd September, 1895. Also from three males and a female in the collection of Mr. T. R. Bell, who bred them at Tarimpur in the North Kanara District in February and March, 1895. The transformations of the species will be found described in Journ. Bomb. Nat. Hist. Soc., vol. xi, p. 49, n. 212 (1897).

30. *HALPE HAZIS*, n. sp., Plate IV, Fig. 27, ♂.

HABITAT: Nias Island.

EXPANSE: ♂, 1·15 inches.

DESCRIPTION: MALE. UPPERSIDE, *both wings* hair-brown; *cilia*

ochreous. *Forewing* with a translucent ochreous dot in the subcostal interspace; two similar spots placed inwardly obliquely in the median interspaces, the upper the smaller and elongated, the lower quadrate. *Hindwing* immaculate. *UNDERSIDE*, both wings ochreous-brown; all the markings tawny or deep ochreous. *Forewing* with a small oblong spot in the discoidal cell at the origin of the second subcostal nervule; the dot in the subcostal interspace as on the upperside, with a minute dot immediately anterior to it, divided from it by the subcostal nervure; the median spots as on the upperside; a submarginal series of five quadrate spots divided by the veins, the uppermost posterior to the fifth subcostal nervule rather larger than the others, the posterior-most in the upper median interspace. *Hindwing* with an irregular discal series of spots from the apex to near the middle of the abdominal margin, the middle spot quadrate and much larger than the others; an outer discal series of five crescentic spots, the concavity of each directed forwards, commencing just posterior to the second spot of the discal series and ending anterior to the submedian nervure, the posteriormost spot much larger than the others. *Antennæ* dark brown, the club posterior to the whip-like apex ferruginous. *Head* and *body* above dark brown. *Abdomen* beneath pale brown.

This species seems nearest allied to *Halpe moorei*, Watson, and is, as far as I know, the only species of *Halpe* occurring in the island, except *H. zema*, Hewitson, of which *Hesperia ormenes*, Weymer, is a synonym. *H. hazis* differs from *H. moorei* in lacking entirely the sexual brand of that species on the forewing, in that wing there are only three spots on the upperside instead of at least six, usually seven, and the spots are ochreous instead of white; the cilia is not checkered as it is in *H. moorei*; the markings of the underside are very similar, but there are fewer of them in the present species, and they are deep ochreous rather than whitish.

Described from a single example kindly sent to me by Herr H. Fruhstorfer.

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## EXPLANATION OF THE PLATES.

## PLATE I.

- Fig. 1. *Delias dives*, n. sp., ♂, p. 562.  
 „ 2. *Gonepteryx zanakoides*, n. sp., ♂, p. 564.  
 „ 3. *Neptis (Phædyma) nectens*, n. sp., ♀, p. 548.  
 „ 4. *Euplœa (Vadebra) elwesiana*, n. sp., ♂, p. 543.  
 „ 5. *Ypthima megalia*, n. sp., ♂, p. 546.  
 „ 6. *Parapieris chumbiensis*, n. sp., ♂, p. 563.  
 „ 7. *Gonepteryx zanakoides*, n. sp., ♀, p. 564.  
 „ 8. *Lethe (Kerrata) lyncus*, n. sp., ♂, p. 544.

## PLATE II.

- Fig. 9. *Calinaga cercyon*, n. sp., ♂, p. 550.  
 „ 10. *Castalius roxana*, de Nicéville, ♂, p. 556.  
 „ 11-12. *Charaxes (Haridra) aristogiton*, Felder, gynandromorphous example, p. 552.  
 „ 13. *Pirdana distanti*, Staudinger, ♀, p. 574.  
 „ 14. *Dodona dracon*, n. sp., ♂, p. 555.  
 „ 15. *Odina ortygia*, de Nicéville, ♂, p. 569.  
 „ 16. *Pirdana distanti*, Staudinger, ♂, p. 574.

## PLATE III.

- Fig. 17. *Bullis valentia*, Swinhoe, ♀, p. 559.  
 „ 18. „ „ „ ♂, p. 559.  
 „ 19. *Cynthia cynia*, n. sp., ♂, p. 547.  
 „ 20. „ „ „ ♀, p. 547.  
 „ 21. *Hypolycæna danisoides*, n. sp., ♀, p. 558.  
 „ 22. *Halpe hyrtacus*, n. sp., ♂, p. 575.  
 „ 23. *Rapala albapex*, n. sp., ♂, p. 560.  
 „ 24. *Charaxes (Haridra) connectens*, n. sp., ♂, p. 554.

## PLATE IV.

- Fig. 25. *Padraona paragola*, de Nicéville, ♂, p. 574.  
 „ 26. *Isma idyalis*, n. sp., ♂, p. 572.  
 „ 27. *Halpe hazis*, n. sp., ♂, p. 575.  
 „ 28. *Papilio (Byasa) polla*, de Nicéville, ♂, p. 565.  
 „ 29. *Hysudra (?) hades*, de Nicéville, ♀, p. 560.  
 „ 30. *Papilio (Sarbaria) doddsi*, Janet, ♂, p. 566.  
 „ 31. *Padraona paragola*, de Nicéville, ♀, p. 574.  
 „ 32. *Isma idyalis*, n. sp., ♀, p. 572.  
 „ 33. *Inessa ilion*, n. sp., ♂, p. 571.
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